

REMARKS

Claims 1-47 are pending in the application. Claims 17-20 and 36 are withdrawn from further consideration by the Examiner pursuant to a restriction requirement under 35 U.S.C. §121. Responsive to the Office Action dated 18 September 2006, applicants have amended claims 37 and 38, and added new claim 47 (shown in the Listing of Claims attached hereto) in order to more particularly and completely claim the present invention. Amendments to claims 14 and 16 have been made to correct minor errors noted by applicants. No new matter has been introduced. Applicants respectfully request reconsideration of the application in view of the foregoing amendment and following remarks.

Claim Objections

Claim 38 has been amended to address the informality noted by the Examiner. Specifically, claim 38 has been amended to specify "a fourth hollow cylinder comprising elastomer, resin, or both elastomer and resin disposed between the third and fourth supporting rings." Support for the amendment may be found in paragraph 54 of the application. Accordingly, applicants respectfully request the Examiner to withdraw the objection to claim 38.

Claim Rejections – 35 U.S.C. §103(a)

Claims 37-38 and 40-41 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Arian et al. (US 6,564,899). Claims 1-16, 21-35, 39 and 42-46 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Arian in view of Hoyle et al. (US 5,036,945) and Meehan (US 6,535,458). Reconsideration is requested.

Independent claim 37 has been amended to specify:

"a second hollow cylinder sandwiched between the first and second supporting rings, and comprising an acoustic impedance matched to an acoustic impedance of a borehole fluid."

Arian does not disclose or suggest a hollow cylinder having an acoustic impedance that is matched to an acoustic impedance of a borehole fluid, as specified in amended claim 37 herein. In addition, Arian does not disclose or suggest that the hollow cylinder is sandwiched between first and second supporting rings.

In Arian, the rings 132, 134 are compressed and held in place by the band 136. See, Figure 10 of Arian and col. 9, lines 16-17. The band 136 of Arian is not sandwiched between the rings 132, 134, and does not have an acoustic impedance matched to a borehole fluid, as in instant claim 37. Therefore, claim 37 should be allowable over the cited Arian reference.

It appears from pages 5 and 6 of the Office Action that the Examiner has rejected independent claims 1 and 22 on the grounds that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working range involves only routine skill in the art. See, last sentence on page 5 carrying over to page 6. In fact, the Examiner fails to note that Arian teaches away from the features in claims 1 and 22, i.e., acoustic impedance differs by “at least a factor of two” (in claim 1) and is “at least twice as high as the second zone” (in claim 22).

Arian teaches that the acoustic impedance of the absorbing rings should be closer in value to the acoustic impedance of the tool body so that transfer of acoustic energy from the tool body to the acoustic absorbing rings can be enhanced. See, col. 9, lines 28-33. In contrast, as claimed in claims 1 and 22, alternating zones of different acoustic impedance are provided to reduce or eliminate noise (note, for example, the instant specification at paragraph 35), which is a new and unexpected result relative to the cited references of Arian, Hoyle and Meehan. *In re Wooduff*, 919 F.2d 1575, 16 USPQ 2d 1934 (Fed. Cir. 1990). Therefore, claims 1 and 22 should be allowable over the prior art of record.

The Examiner appears to have rejected independent claim 42 on the grounds of obviousness since “rearranging parts of an invention involves only routine skill in the

art.” Office Action at page 6. The Examiner, however, admits that Arian and Hoyle do not disclose acoustic impedance zones that cover a plurality of spaced receiver blocks and acoustic receivers, as specified in instant claim 42.

The mere fact that a person skilled in the art could rearrange the parts of a reference device to meet the terms of the claim is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of the instant specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

The cited references of Arian, Hoyle and Meehan do not provide any motivation or reason for the rearrangement proposed by the Examiner. In fact, without the benefit of the instant invention, there would be no reason for a person skilled in the art to make the rearrangement proposed by the Examiner. Therefore, claim 42 should be allowable.

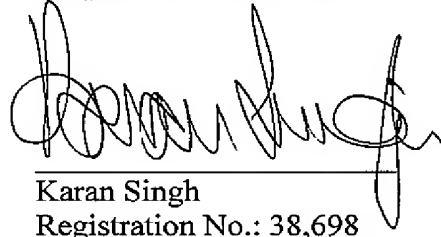
For the reasons discussed above, independent claims 1, 22, 37 and 42 should be allowable. Also, claims 2-21, 23-36, 38-41 and 43-47, which depend from corresponding independent claims 1, 22, 37 and 42, should be allowable for at least the same reasons.

Conclusion

In light of the above remarks, applicants believe that the present application and claims 1-47 are in proper condition for allowance. Such allowance is earnestly requested.

In the event that any additional fees or credits are due owing to this response, the Commissioner is hereby authorized to charge the amount necessary to cover any fee that may be due or to credit any overpayment to Deposit Account 50-1122.

Respectfully submitted,



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